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| **Grade 5** | **Lesson:** **Traits of Organisms Part 9**  | Reference to English Interconnections LessonNone |
| **Science Standard(s): Standard 5 Objective 2**  |
| **Content Objective(s):** | **Language Objective(s):** |
| Students will be able to research a particular plant or animal and identify specific traits that provide an advantage for it to survive in its environment by using the internet and other research tools in a small group.***I can look up information about a plant or animal and identify traits that help it survive in its environment by using the internet and other research tools in a small group.******我可以运用网路和其他的研究工具和我的小组成员一起寻找有关一种植物或动物的资讯，并辨认出能够帮助它在它生活的环境下生存的特征/特性。*** | Students will be able to share information about the traits of a particular plant or animal provide an advantage for it to survive in its environment by creating a poster or diagram with a small group and presenting it to the class.***I can share information about the traits of a plant or animal that help it survive in its environment by creating a poster or diagram with a small group and presenting it to the class*.****我可以跟我的小组成员一起合作找出关于能够帮助一种植物或动物在它的生活环境下生存的一些特征/特性的资讯，并且能够把这些资讯做成一张海报或图表在班上发表。** |
| **Essential Questions:***How do the traits of plants and animals help them survive in their environments?* | **Required Academic Vocabulary for Word Wall:****Listen:** traits, environment, survival, research, internet, books, magazines, volumes, issues, search engine, table of contents, source, credit, website听：特征/特性，环境，生存，研究，网路，书籍，期刊，卷，册，搜寻引擎，目录，来源，功劳，网站**Speak:** traits, environment, survival, research, internet, books, magazines, volumes, issues, table of contents, source, website说：特征/特性，环境，生存，研究，网路，书籍，期刊，卷，册，目录，来源，网站**Read:** internet, books, magazines, volume, issue, website, source读：网路，书籍，期刊，卷，册，网站**Write:** traits, environment, survival写：特征/特性，环境，生存**Sentence Frames:** |
| **Materials:*** Picture of Research Tools
* Computers, laptops, or access to the computer lab (one computer for each group of students)
* Books for research about specific plants or animals
* Magazines for research about specific plants or animals
* Information Collection Sheet- 1 copy for each group of students
* One Large Poster or Chart Paper for each group of students
* Lined paper for students to use if they choose
 | **Additional Lesson Vocabulary:**Chapter, page number, title, author章，页数，书名，作者 |
| **Lesson:**  | **Instructional Time: 100 Minutes over a couple of days** |
| **Opening:** **(3 minutes)**Hook: Post the picture of the research tools.Question: “What do all of these things have in common? Turn to your partners and discuss.”问题：“这些东西有什么共同的特点？请跟你的伙伴讨论一下。”* Have a couple of students share their ideas.

Explain: “All of these are tools that we can use to research something. When we research a topic, we are looking for more information about a different topic. The computer with the internet, books, people, and magazines can all give us information about topics. Today we are going to use these tools to research a plant or an animal. We are going to look for information about its traits that help it survive in its environment. Let’s look at our objective for the day.”解释：“这些都是可以帮助我们做研究的工具。当我们在研究一个题目的时候，我们会寻找很多相关题目的资讯，从网路、书籍、人、和期刊等都可以帮助我们寻找资讯。今天我们就要用这些工具来帮助我们研究一种植物或动物，并且找出帮助这种植物或动物在它的生活环境下生存的特征/特性。现在我们就来看看今天的学习目标。Introduce the Objectives: Have the students read the content as a class. Have Partner 1 tell Partner 2 one thing the class will learn today. Have Partner 2 tell Partner one how we will know that we learned it.**Introduction to New Material (Direct Instruction): (15 minutes)**Explain: “We can use the internet to research a plant or animal.” Use your projector and your computer to pull up a search engine such as Google so all of the students can see. “We can use a search engine such as Google to look up information about a plant or animal. Let’s look up more information about the Arctic Fox. I can type in “Arctic Fox” in this box and click on search. I can see several different links I can click on to get information about the fox. I can also click on ‘images’ to see different pictures of the arctic fox. When I click on the different links, I do not want to read all of the information about the fox. I am looking for information about its traits and how they help the fox survive in its environment. If I cannot find this information after clicking on a couple of links, I can refine my search. I can get more specific information if I type a more specific description in my search box. This time I am going to type “Traits of an Arctic Fox”. Now I see some links that come up that apply to what I am researching and will give me good information. When I find good information, I should write down what I read and also where I found it (website address). It is important to write down where I find this information so I can find it again if I need to read more, and so that I can let others know where I found this information. As I write or share information I learn, I need to let others know that I did not come up with these ideas on my own. I got help from these resources. It also helps others know where to find the information if they want to learn more about my topic as well.”解释：“我们能够用网路来研究一种植物或动物。”（用你的电脑和投影机叫出一个搜寻引擎，例如：谷歌，让所有的学生都能看到。）“我们可以用一个搜寻引擎，例如：谷歌，来寻找关于一种植物或动物的相关资讯。现在我们就来搜寻关于北极狐的资讯。我可以在这个格子里打出“北极狐”然后点选搜寻，就可以看到很多相关的链结网站让我可以点选来获得关于这种狐狸的资讯。我也可以点选“图片”来看看很多北极狐的图片。当我点选这些网站的时候，我不需要每样资讯都详细阅读，我只要找关于它的特征/特性以及这些特征/特性是如何帮助它生存的资讯就可以了。如果我搜寻了几个链结的网站都找不到我要的资讯，还可以重新再做一次更精确的搜寻。重新搜寻的时候就要打出更精确的相关词语来描述我要做的题目，才能获得更多相关的资讯。这次我就要打出“北极狐的特性”重新做一次搜寻。现在我们就可以看到更多跟我要做的题目相关而有用的资讯。当我找到有用的资讯的时候，我就应该把这些资讯写下来，并且记录下来找到这些资讯的网站的网址。写下这些资讯来源的网址非常重要，这样如果我想要再次上这个网站去找寻更多资料或是要让别人知道我的资讯来源的时候，就有依据。当我在写研究报告或是跟别人分享我的研究结果的时候，一方面一定得让别人知道这些资讯不是我随便假造的，而是根据一些可靠的资讯来源而做出的报告；另一方面，当别人想要研究同样题目的时候，他们也可以知道到哪儿去找相关的资料。”Question: “What is the process for using the internet to research a plant or animal? Explain the process in your own words to your partner.” 问题：“上网搜寻一种植物或动物的资讯有哪些程序？请跟你的伙伴用你自己的话来解释一下这些程序。”* Have a couple of students share with the class what they discussed with their partners.

Explain: Show the class a couple of books about plants and animals. “We can also use books to research different plants or animals. We can go to the library and look for books on specific animals or environments. It is important to use the Table of Contents in our research. We do not have the time to read the entire book, so the Table of Contents will give us major topics in the book and the specific page numbers we can turn to. If it does not seem that the Table of Contents has the information we need, we can look in another book. When I find good information, I should write it down as well as the page number, the title book and the author. Again, this will help me if I need to find it again, it will help me share with others where to find the information, and it will give credit to the original owner of the ideas and information.”解释：（给学生们看几本关于植物和动物的书籍。）“我们也可以从书籍上找资料来研究植物或动物。大家可以到图书馆寻找关于动物或环境的书籍。做研究的时候利用书中的目录来找资料是很重要的方法，因为我们没有时间看完整本书，所以看目录就可以知道书中重要的题目是什么以及要翻到第几页去找我们需要的资料。如果目录中没有我们需要的资料，我们就可以直接找别本书。当我找到有用的资料的时候，我应该把这本书的书名、作者、和资料来源的页数写下来。同样的，一方面，我可以很容易在需要的时候找到这本书，另一方面，别人也可以知道是在哪儿找到这些资讯的；同时，也是把资讯来源归功于原作者。”Question: “What is the process for using a book to research a plant or animal? Explain the process in your own words to your partner.” 问题：“当你利用书籍研究植物或动物的时候，有哪些步骤？请用你自己的话跟你的伙伴解释一下。”* Have a couple of students share with the class what they discussed with their partners.

Explain: “A person who is an expert can also share information with us, and we can use this in our research. However, for this specific project we will not have any experts to help us research our plants or animals.”“有些专家也可以跟我们分享他的知识，这些专家分享的资讯也可以作为我们研究资料的来源。” Show the class a couple of magazines about plants and animals. “We can use magazines in a similar way that we use a book to research. A magazine should have a Table of Contents with page numbers as well. Magazines are organized in Volumes and Issues. If we do not find the information we need in a particular magazine, we could look in another volume or issue of the magazine with the same title. There are usually indexes found online or in a library that can help us find the volume and issue that we need for our research. When I find good information, I should write it down as well as the page number, the title of the magazine, and the volume and issue. This will help me if I need to find it again, it will help me share with others where to find the information, and it will give credit to the original owner of the ideas and information.”“除了书籍以外，期刊也可以作为研究资料的来源。一本期刊也会有目录和页数。不过期刊会以卷和册来划分。如果我们在某一本期刊里找不到我们要的资讯，我们可以在同名的期刊别的卷或册中找到我们要的资讯。在网路或图书馆里可以帮助我们找到跟我们的研究题目相关的卷和册。当我找到有用的资讯时，我应该马上写下这本期刊的名字、属于第几卷和第几册、在第几页。一方面，我可以很容易在需要的时候找到这本期刊，另一方面，别人也可以知道是在哪儿找到这些资讯的；同时，也是把资讯来源归功于原作者。”Question: “What is the process for using a magazine to research a plant or animal? Explain the process in your own words to your partner.” 问题：“当你利用期刊研究植物或动物的时候，有哪些步骤？请用你自己的话跟你的伙伴解释一下。”* Have a couple of students share with the class what they discussed with their partners.

**Guided Practice: (15 minutes per research tool)**Explain: “We are going to use these tools to find information about a plant or animal. Each group of students will select a plant or animal they would like to research. You can get some ideas from the cards we have used in our past couple of lessons. You can also select a different plant or animal. However, avoid selecting an animal that is a pet and cared for by humans. We want to think of animals in their natural, free environments. You will have the next minute to decide in your groups which plant or animal you would like to research. Go.”解释：“我们现在就要用这些工具来寻找关于一种植物或动物的资讯。每一组要选择一种你们想要研究的植物或动物，你们可以用我们前几节课用过的卡片来找灵感，也可以自己选一种植物或动物。不过，不要选人们所养的宠物当题目，我们希望研究的动物是在自然环境下生长的动物。现在你们有一分钟的时间来决定你们想要研究的植物或动物。开始！”* Students discuss in groups and pick a plant or animal to research.
* Borrow computers from the laptop lab or cart (if available) so there is one computer per group of students. Use computers currently in your room (if available) or arrange to take your class to the computer lab. Students should be sharing one computer in a small group.
* Pass out one Information Collection Sheet to each group of students.

*Use the modeling cycle:**Teacher Does:* * Once again use a projector connected to your computer to pull up a search engine such as google. Type in a topic and show the links that pop up. Show students how you don’t read everything, but look for applicable information. If you cannot find the information you want, you need to write something more specific in the search box. Use the Information Collection Sheet to copy down important information and note the source.

*Teacher Does with a Group of Students:** Call up a group of students to help you model. Have them work together to type in their plant or animal’s name in the search bar. Have them take turns talking out loud as they navigate the different links and webpages. You may have to help them talk through the process. Help them write down a couple of pieces of information in their Information Collection Sheet and note the source.

*All Students Practice:** Have all students work in their groups using the internet to search for information about the traits of their plant or animal and how it helps them survive in their environment. Ensure they are collecting the information in their Information Collection Sheet and documenting their sources.

Use this modeling cycle for the different research tools. This will likely take a couple of different days to use the different sources. Gather information about their topics so you can find books and magazines in the library to help them. If there are not good magazines available, see if the magazine has a website that is available for students to use.**Independent Practice: (20 minutes to prepare, 15 minutes to present to class)*** Explain: “Now you are going to transfer the different information into a presentation for the class. You will have poster paper you can use to write information, draw pictures, print out pictures, draw diagrams or use however you would like. You may decide you want to write your main points on your poster and take turns presenting them. You may decide you want to write a paragraph or two on a separate piece of paper and pass it around as you present and use your poster for pictures and diagrams. You may decide that you want to write a couple of statements down on different sheets of paper for each group member to help them present and use your poster for pictures and diagrams. The choice is yours. Your group will need to work together and decide how you want to collect and present your information. You do not need to say where you found your information or write your sources on your posters. You may still choose to use the internet, books and magazines to collect more information as you complete your presentation. The choice is yours.”

解释：“现在你们要把你们所找到的资讯变成一份可以在班上演示的报告。你们可以用海报纸来写资讯、画图、印出图片、画图表或用任何方式演示都可以。你们自己决定用什么方式演示：可以把重点写在海报上面，然后小组成员轮流演示；也可以把找到的资讯写成一、两段文章写在另一张纸上，把图片或图表画在海报上，然后在小组报告的时候，一边展示海报，一边在班上传阅你们的文章；还可以把图片或图表画在海报上，然后把重点写在不同张纸上，每个小组成员有一张纸并且负责报告那一个部份，报告的时候展示你们的海报。总之，你们自己决定。每一组要一起合作，决定你们要报告什么内容以及要如何报告。你们不用把资讯的来源写在海报上，也不用告诉大家。你们可以自己决定要采用网路、书籍、或是期刊去找有用的资料来完成你们的报告。你们自己选择资料来源。”* The modeling cycle can be used to show different ways the class can present their information. However, if you model this process students may feel they need to copy what you did, and it may hinder their creativity. It depends on your group of students and if they need more support and structure.
* This may take a couple of class periods. When students are prepared, have them get up in front of the class in their groups and present their information. Give the class the opportunity to ask the group questions about their plant or animal and how it survives in its environment.

**Closing: (2 minutes)**Revisit the Objectives: Have students reread the content objective as a class. Have students explain to their partners one new skill they learned today, and how they know they learned it. Have some students share with the class.Real World Application: Display their posters in the room or in the hall for them to see and celebrate the end of their unit and their hard work. Encourage students to look for plants and animals around them and analyze the traits they have that help them survive in their environments. |
| **Assessment:** |
| Observe students during their research and preparation of their posters and presentations. Observe their conversations in guided and independent practice to assess their mastery of the language objective. |
| **Extra Ideas:** |
| * Students could be required to write a research paper in small groups, partnerships or individually as an extension to this activity.
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**Information Collection Sheet**

**Internet**

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| **Information** | **Source: Website Address** |
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**Books**

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| **Information** | **Source: Title, Author, Page Number** |
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**Magazines**

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| **Information** | **Source: Title, Volume, Issue, Page Number** |
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**资讯搜集单**

**网路**

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**书籍**

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| **资讯** | **来源：书名、作者、页数** |
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**期刊**

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| **资讯** | **来源：期刊名称、卷、册、页数** |
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